

Flood Control Project Maintenance
2019 Structure Summary Report
Overall Unit and Item Ratings

Lake County Watershed Protection District

Clover Creek Diversion Structure

Overall Unit Rating	Rated Item	Item Rating
M	Photo Documentation	N
	Vegetation & Obstructions	M
	Shoaling / Sedimentation	U
	Erosion / Bank Caving	A
	Revetments	N
	Encroachments	A
	Culverts: Inlets / Outlets	M
	Culverts: Breaks / Holes / Cracks	A
	Metal Pipes	A
	Trash Racks	N
	Flap Gates	N
	Sluice/Slide Gates	A
	Electric Gate Operators	N
	Manual Gate Operators	A
	Concrete Surfaces	A
	Concrete Tilting / Settlement	A
	Concrete Foundations	A
	Security Fencing	N
	Closure Structures	N
	Trash Rakes	N
	Other Metallic Items	A
	Monolith Joints	N
	Safety	A
	Operation & Maintenance Manual	A

Flood Control Project Maintenance
Unit Cover Sheet
2019 Structure Inspection Results

Lake County Watershed Protection District

Structure
Clover Creek Diversion Structure

Structure Rating	M
Date of Inspection	6/25/2019 - 7/2/2019
DWR Inspector	Zach Jojola
Accompanied By	Scott Webb Lake County Water Resources
	Makar Sokol DWR

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Structure 2019

Lake County Watershed Protection District

Structure	Structure Length	Inspection Start/End	Inspector
Clover Creek Diversion Structure		06/25/2019 07/02/2019	Zach Jojola

LM Start	0.00	Rating **	N	Issue No.	1
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels	GPS Latitude/Longitude			
		Start	End		
Item	Photo Documentation	39.177050 °		39.177050 °	
		-122.898750 °		-122.898750 °	
DWR ID	DWR_NA0009_36_t_2012_1				
Action/Comments					
Inspector Comments: Clover Creek Diversion Structure consists of a weir structure, a concrete headwall with six 36-inch CMP culverts and a steel walkway. Two of the six pipes have screw gates, the rest appear to have hand operated slide gates. This structure is designed to limit flows to Clover Creek to a maximum of 500fcs while diverting the remaining flood flows west to Middle Creek.					

Photo 1 of 1 : ST_2019_NA0009_36_1_20190703_00017.jpg



View of the structure. Summer 2019.

LM Start	0.00	Rating **	M	Issue No.	2
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels	GPS Latitude/Longitude			
		Start	End		
Item	Vegetation & Obstructions	39.177050 °		39.177050 °	
		-122.898750 °		-122.898750 °	
DWR ID	DWR_NA0009_36_t_2012_2				
Action/Comments					
Inspector Comments: The channel had vegetation that appear to block 25% of the capacity.					

Photo 1 of 3 : ST_2019_NA0009_36_2_20190703_00018.jpg



View of the vegetation at the outlet of the structure. Summer 2019.

LM Start	0.00	Rating **	M	Issue No.	2 (cont)
LM End	0.00	Issue Type +	Ma	Location *	

Photo 2 of 3 : ST_2019_NA0009_36_2_20190703_00019.jpg



View of the vegetation looking at the outlet culverts. Summer 2019.

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable
N : Not Inspected/Rated
C : Corrected
A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiency
Ob : Design & System Obsolescence
En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Structure 2019

Lake County Watershed Protection District

Structure	Structure Length	Inspection Start/End	Inspector
Clover Creek Diversion Structure		06/25/2019 07/02/2019	Zach Jojola

LM Start	0.00	Rating **	M	Issue No.	2 (cont)	
LM End	0.00	Issue Type +	Ma	Location *		
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude		
				Start		End
Item	Vegetation & Obstructions			39.177050 °		39.177050 °
				-122.898750 °		-122.898750 °
DWR ID	DWR_NA0009_36_t_2012_2					
Action/Comments						
Inspector Comments: The channel had vegetation that appear to block 25% of the capacity.						

Photo 3 of 3 : ST_2019_NA0009_36_2_20190703_00020.jpg



View of the vegetation at the concrete headwall slide gates and culverts.
Spring 2019.

LM Start	0.00	Rating **	U	Issue No.	3
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude	
				Start	End
Item	Shoaling / Sedimentation			39.177050 °	39.177050 °
				-122.898750 °	-122.898750 °
DWR ID	DWR_NA0009_36_t_2012_3				
Action/Comments					
Inspector Comments: Significant gravelbar is impeding the flow of the channel. A new channel upstream created from the gravel reroutes low flows past the structure. The bar appears to be higher than the slide gates on the concrete headwall. However, a backchannel has formed that allows some water to flow through the slide gates and culverts. Lake County is working to secure environmental permits to excavate the gravel.					

Photo 1 of 5 : ST_2019_NA0009_36_3_20190701_00012.jpg



View of the gravelbar, facing downstream from the control structure.
Summer 2019.

LM Start	0.00	Rating **	U	Issue No.	3 (cont)
LM End	0.00	Issue Type +	Ma	Location *	

Photo 2 of 5 : ST_2019_NA0009_36_3_20190701_00016.jpg



View of the gravelbar, facing upstream from the control structure.
Summer 2019.

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable
N : Not Inspected/Rated
C : Corrected
A/W : Acceptable but Monitor & Maintain

+ Issue Type

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Structure 2019

Lake County Watershed Protection District

Structure	Structure Length	Inspection Start/End	Inspector
Clover Creek Diversion Structure		06/25/2019 07/02/2019	Zach Jojola

LM Start	0.00	Rating **	U	Issue No.	3 (cont)	
LM End	0.00	Issue Type +	Ma	Location *		
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude		
				Start	End	
Item	Shoaling / Sedimentation			39.177050 °	39.177050 °	
				-122.898750 °	-122.898750 °	
DWR ID	DWR_NA0009_36_t_2012_3					
Action/Comments						
Inspector Comments: Significant gravelbar is impeding the flow of the channel. A new channel upstream created from the gravel reroutes low flows past the structure. The bar appears to be higher than the slide gates on the concrete headwall. However, a backchannel has formed that allows some water to flow through the slide gates and culverts. Lake County is working to secure environmental permits to excavate						

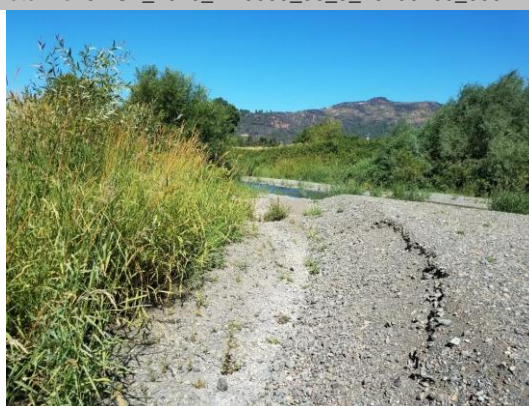
Photo 3 of 5 : ST_2019_NA0009_36_3_20190703_00021.jpg



View of back-channel that has formed, facing towards the control structure. Summer 2019.

LM Start	0.00	Rating **	U	Issue No.	3 (cont)
LM End	0.00	Issue Type +	Ma	Location *	

Photo 4 of 5 : ST_2019_NA0009_36_3_20190703_00024.jpg



View of the back-channel from the control structure. Summer 2019.

LM Start	0.00	Rating **	U	Issue No.	3 (cont)
LM End	0.00	Issue Type +	Ma	Location *	

Photo 5 of 5 : ST_2019_NA0009_36_3_20190703_00023.jpg



View of the control structure from the gravelbar. Summer 2019.

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable
N : Not Inspected/Rated
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A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiency
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Structure 2019

Lake County Watershed Protection District

Structure	Structure Length	Inspection Start/End	Inspector
Clover Creek Diversion Structure		06/25/2019 07/02/2019	Zach Jojola

LM Start	0.00	Rating **	A	Issue No.	4
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			39.177050 °	39.177050 °
				-122.898750 °	-122.898750 °
DWR ID	DWR_NA0009_36_t _ 2012_4				
Action/Comments					
Inspector Comments: There was no visible active erosion or bank caving observed.					

No Photos

LM Start	0.00	Rating **	N	Issue No.	5	
LM End	0.00	Issue Type +	Ma	Location *		
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude		
				Start		End
Item	Revetments			39.177050 °		39.177050 °
				-122.898750 °		-122.898750 °
DWR ID	DWR_NA0009_36_t _ 2012_5					
Action/Comments						
Inspector Comments: No revetment exists at this structure.						

No Photos

LM Start	0.00	Rating **	A	Issue No.	6	
LM End	0.00	Issue Type +	Ma	Location *		
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude		
				Start	End	
Item	Encroachments			39.177050 °	39.177050 °	
				-122.898750 °	-122.898750 °	
DWR ID	DWR_NA0009_36_t _ 2012_6					
Action/Comments						
Inspector Comments: No trash or debris were present in the channel.						

No Photos

* Location LS : Land Side WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Structure 2019

Lake County Watershed Protection District

Structure	Structure Length	Inspection Start/End	Inspector
Clover Creek Diversion Structure		06/25/2019 07/02/2019	Zach Jojola

LM Start	0.00	Rating **	M	Issue No.	7
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude	
				Start	End
Item	Culverts: Inlets / Outlets			39.177050 °	39.177050 °
				-122.898750 °	-122.898750 °
DWR ID	DWR_NA0009_36_t_2012_7				
Action/Comments					
Inspector Comments: Minor vegetation at the outlet and inlet. It doesn't appear to block over 10% of the opening.					

Photo 1 of 1 : ST_2019_NA0009_36_7_20190701_00015.jpg



View of gravel blocking the culvert inlets. Summer 2019.

LM Start	0.00	Rating **	A	Issue No.	8
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude	
				Start	End
Item	Culverts: Breaks / Holes / Cracks			39.177050 °	39.177050 °
				-122.898750 °	-122.898750 °
DWR ID	DWR_NA0009_36_t_2012_8				
Action/Comments					
Inspector Comments: There were no visible holes or cracks in the culvert.					

No Photos

LM Start	0.00	Rating **	A	Issue No.	9
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude	
				Start	End
Item	Metal Pipes			39.177050 °	39.177050 °
				-122.898750 °	-122.898750 °
DWR ID	DWR_NA0009_36_t_2012_9				
Action/Comments					
Inspector Comments: The metal pipes appeared to be in good condition.					

No Photos

*** Location**
LS : Land Side
WS : Water Side
CR : Crown

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A/W : Acceptable but Monitor & Maintain

+ Issue Type
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Structure 2019

Lake County Watershed Protection District

Structure	Structure Length	Inspection Start/End	Inspector
Clover Creek Diversion Structure		06/25/2019 07/02/2019	Zach Jojola

LM Start	0.00	Rating **	N	Issue No.	10
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels	GPS Latitude/Longitude			
		Start		End	
Item	Trash Racks	39.177050 °		39.177050 °	
		-122.898750 °		-122.898750 °	
DWR ID	DWR_NA0060_36_t_2013_10				
Action/Comments					
Inspector Comments: There are no trash racks at this structure.					

No Photos

LM Start	0.00	Rating **	N	Issue No.	11
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels	GPS Latitude/Longitude			
		Start		End	
Item	Flap Gates	39.177050 °		39.177050 °	
		-122.898750 °		-122.898750 °	
DWR ID	DWR_NA0009_36_t_2012_11				
Action/Comments					
Inspector Comments: Flap gates don't exist at this structure.					

No Photos

LM Start	0.00	Rating **	A	Issue No.	12
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude	
				Start	End
Item	Sluice/Slide Gates			39.177050 °	39.177050 °
				-122.898750 °	-122.898750 °
DWR ID	DWR_NA0009_36_t_2012_12				
Action/Comments					
Inspector Comments: The slide gates appeared to be in good working condition.					

Photo 1 of 1 : ST_2019_NA0009_36_12_20190625_00006.jpg



View of the slide gates. Summer 2018.

*** Location**

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**** Rating**

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Structure 2019

Lake County Watershed Protection District

Structure	Structure Length	Inspection Start/End	Inspector
Clover Creek Diversion Structure		06/25/2019 07/02/2019	Zach Jojola

LM Start	0.00	Rating **	N	Issue No.	13
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude	
				Start	End
Item	Electric Gate Operators			39.177050 °	39.177050 °
				-122.898750 °	-122.898750 °
DWR ID	DWR_NA0009_36_t_2012_13				
Action/Comments					
Inspector Comments: Electric gate operators do not exist at this location.					

No Photos

LM Start	0.00	Rating **	A	Issue No.	14
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude	
				Start	End
Item	Manual Gate Operators			39.177050 °	39.177050 °
				-122.898750 °	-122.898750 °
DWR ID	DWR_NA0009_36_t_2012_14				
Action/Comments					
Inspector Comments: The manual gate operators appeared to be operational.					

Photo 1 of 1 : ST_2019_NA0009_36_14_20190625_00007.jpg



View of the manual gate operators. Summer 2018.

LM Start	0.00	Rating **	A	Issue No.	15
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude	
				Start	End
Item	Concrete Surfaces			39.177050 °	39.177050 °
				-122.898750 °	-122.898750 °
DWR ID	DWR_NA0009_36_t_2012_15				
Action/Comments					
Inspector Comments: There was no scaling or cracking on the concrete surfaces.					

No Photos

*** Location**

LS : Land Side
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CR : Crown

**** Rating**

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Structure 2019

Lake County Watershed Protection District

Structure	Structure Length	Inspection Start/End	Inspector
Clover Creek Diversion Structure		06/25/2019 07/02/2019	Zach Jojola

LM Start	0.00	Rating **	A	Issue No.	16
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels	GPS Latitude/Longitude			
		Start		End	
Item	Concrete Tilting / Settlement	39.177050 °		39.177050 °	
		-122.898750 °		-122.898750 °	
DWR ID	DWR_NA0009_36_t_2012_16				
Action/Comments					
Inspector Comments: There was no sign of settlement or tilting at this structure.					

No Photos

LM Start	0.00	Rating **	A	Issue No.	24
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude	
				Start	End
Item	Concrete Foundations			39.177050 °	39.177050 °
				-122.898750 °	-122.898750 °
DWR ID	DWR_NA0060_36_t_2013_24				
Action/Comments					
Inspector Comments: There was no scouring or erosion near the structure.					

No Photos

LM Start	0.00	Rating **	N	Issue No.	18	
LM End	0.00	Issue Type +	Ma	Location *		
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude		
				Start		End
Item	Security Fencing			39.177050 °		39.177050 °
				-122.898750 °		-122.898750 °
DWR ID	DWR_NA0009_36_t_2012_18					
Action/Comments						
Inspector Comments: Security fences do not exist at this location.						

No Photos

* Location LS : Land Side WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Structure 2019

Lake County Watershed Protection District

Structure	Structure Length	Inspection Start/End	Inspector
Clover Creek Diversion Structure		06/25/2019 07/02/2019	Zach Jojola

LM Start	0.00	Rating **	N	Issue No.	19
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels	GPS Latitude/Longitude			
		Start		End	
Item	Closure Structures	39.177050 °		39.177050 °	
		-122.898750 °		-122.898750 °	
DWR ID	DWR_NA0009_36_t _ 2012_19				
Action/Comments					
Inspector Comments: Closure structure doesn't exist at this location.					

No Photos

LM Start	0.00	Rating **	N	Issue No.	20
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels	GPS Latitude/Longitude			
		Start		End	
Item	Trash Rakes	39.177050 °		39.177050 °	
		-122.898750 °		-122.898750 °	
DWR ID	DWR_NA0009_36_t _ 2012_20				
Action/Comments					
Inspector Comments: There are no trash rakes at this structure.					

No Photos

LM Start	0.00	Rating **	A	Issue No.	21
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels	GPS Latitude/Longitude			
		Start		End	
Item	Other Metallic Items	39.177050 °		39.177050 °	
		-122.898750 °		-122.898750 °	
DWR ID	DWR_NA0009_36_t _ 2012_21				
Action/Comments					
Inspector Comments: Metallic parts appeared to be in a good condition.					

No Photos

* Location LS : Land Side WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Structure 2019

Lake County Watershed Protection District

Structure	Structure Length	Inspection Start/End	Inspector
Clover Creek Diversion Structure		06/25/2019 07/02/2019	Zach Jojola

LM Start	0.00	Rating **	N	Issue No.	22
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude	
				Start	End
Item	Monolith Joints			39.177050 °	39.177050 °
				-122.898750 °	-122.898750 °
DWR ID	DWR_NA0009_36_t_2012_22				
Action/Comments					
Inspector Comments: Monolith joints do not exist at this location.					

No Photos

LM Start	0.00	Rating **	A	Issue No.	23	
LM End	0.00	Issue Type +	Ma	Location *		
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude		
				Start	End	
Item	Safety			39.177050 °	39.177050 °	
				-122.898750 °	-122.898750 °	
DWR ID	DWR_NA0009_36_t_2012_23					
Action/Comments						
Inspector Comments: New steel handrail was placed around the structure. No safety hazard was present.						

No Photos

LM Start	0.00	Rating **	A	Issue No.	17
LM End	0.00	Issue Type +	Ma	Location *	
Category	Structures & Concrete Lined Channels			GPS Latitude/Longitude	
				Start	End
Item	Operation & Maintenance Manual			39.177050 °	39.177050 °
				-122.898750 °	-122.898750 °
DWR ID	DWR_NA0060_36_t_2013_17				
Action/Comments					
Inspector Comments: This district has the O&M manual in the office.					

No Photos

* Location LS : Land Side WS : Water Side CR : Crown	** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	+ Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement
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